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Application No. 10/750,481
Amendment dated November 29, 2006
Reply to Office Action of October 4, 2006

Docket No.: 30320/15126

AMENDMENTS TO THE CLAIMS

1. (Currently amended) For use with a laser source providing light along a reference axis, an optical filter comprising:

a first filter element having a first angular sensitivity to the reference axis and for tuning a wavelength of the light in response to changes in an angle of incidence of the light upon the first filter element; and

a second filter element having a second angular sensitivity to the reference axis for tuning the wavelength in response to changes in an angle of incidence of the light upon the second filter element, wherein the second angular sensitivity substantially cancels the first angular sensitivity, wherein the wavelength of the light is not tuned by simultaneous rotation of the first and second filter elements relative to the reference axis; and

a support having a first side wall with a first tapering angle and a second side wall opposite the first side wall and with a second tapering angle, the first filter element being mounted to the first side wall, the angle of incidence of the light upon the first filter element being defined by the first tapering angle, the second filter element being mounted to the second side wall, the angle of incidence of the light upon the second filter element being defined by the second tapering angle.

2. (Canceled)

3. (Original) The optical filter of claim 1, wherein the first angular sensitivity is a positive angular sensitivity and wherein the second angular sensitivity is a negative angular sensitivity.

4. (Original) The optical filter of claim 1, wherein the first filter element is a first etalon and the second filter element is a second etalon, wherein the first etalon forms a first acute angle with the direction of incidence and wherein the second etalon forms a second acute angle with the direction of incidence.

5. (Original) The optical filter of claim 4, wherein the first acute angle is substantially equal to the second acute angle.

6. (Original) The optical filter of claim 1, wherein at least one of the first filter element and the second filter element is a tunable filter element.

Application No. 10/750,481
Amendment dated November 29, 2006
Reply to Office Action of October 4, 2006

Docket No.: 30320/15126

7. (Original) The optical filter of claim 6, wherein the tunable filter element comprises a first resistive element for heating the tunable filter element.

8. (Original) The optical filter of claim 7, wherein the tunable filter element comprises a second resistive element for measuring a tunable parameter of the tunable filter element.

9. (Original) The optical filter of claim 1, further comprising a detector coupled to measure a tunable characteristic of the light.

10. (Original) The optical filter of claim 9, wherein the tunable characteristic is wavelength.

11. (Original) The optical filter of claim 1, wherein the first angular sensitivity is offset from the second angular sensitivity.

12. (Currently amended) The optical filter of claim 1, wherein the support is formed of a material having a coefficient of thermal expansion that minimizes angular drift between the first filter element and the second filter element under a change in temperature further comprising a support disposed between the first filter element and the second filter element.

13. (Currently amended) A laser device comprising:

a gain medium;

a laser cavity for receiving a light from the gain medium; and

a filter apparatus disposed to receive the light at an angle of incidence, the filter apparatus and the laser cavity defining a reference axis, the filter apparatus comprising a first filter element having a first angular sensitivity to the reference axis and a second filter element having a second angular sensitivity to the reference axis that substantially cancels the first angular sensitivity wherein a wavelength of light produced by the laser cavity is substantially independent of the angle of incidence, the filter apparatus comprising a support having a first side wall with a first tapering angle and a second side wall opposite the first side wall and with a second tapering angle, the first filter element being mounted to the first side wall and the second filter element being mounted to the second side wall.

14. (Original) The laser device of claim 13, wherein the filter apparatus is disposed within the laser cavity.

Application No. 10/750,481
Amendment dated November 29, 2006
Reply to Office Action of October 4, 2006

Docket No.: 30320/15126

15. (Original) The laser device of claim 13, wherein the filter apparatus is external to the laser cavity.

16. (Currently amended) The laser device of claim 13, wherein the support is formed of a material having a coefficient of thermal expansion that minimizes angular drift between the first filter element and the second filter element under a change in temperature the filter apparatus comprises a first etalon forming a first angle with the reference axis and a second etalon forming a second angle with the reference axis that is equal and opposite to the first angle.

17. (Original) The laser device of claim 13, wherein the filter apparatus is a temperature tuning apparatus.

18. (Currently amended) A transponder comprising:

a receiver;

a transmitter; and

a laser source for producing a laser energy at a wavelength, the laser source having a filter apparatus disposed to receive the laser energy, where the filter apparatus comprises a first filter element having ~~has~~ a first angular sensitivity to a reference axis of the laser source and a second filter element having a second angular sensitivity to the reference axis that substantially cancels the first angular sensitivity, the wavelength of the laser energy being substantially independent of the angular position of the filter apparatus, the laser source comprising a support having a first side wall with a first tapering angle and a second side wall opposite the first side wall and with a second tapering angle, the first filter element being mounted to the first side wall and the second filter element being mounted to the second side wall.

19. (Currently amended) The transponder of claim 18, wherein the support is formed of a material having a coefficient of thermal expansion that minimizes angular drift between the first filter element and the second filter element under a change in temperature the filter apparatus includes a first filter element and a second filter element, wherein the first filter element forms a first angle with the reference axis and wherein the second filter element forms a second angle to the reference axis that is equal and opposite to the first angle.

Application No. 10/750,481
Amendment dated November 29, 2006
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Docket No.: 30320/15126

20. (Original) The transponder of claim 18, wherein the filter apparatus is tunable.